

National Weather Service Grand Forks Spotter Training 2023

Spotter Preparation...

- A proactive approach to spotting *before* storms enter a county is vital to the warning process.
- Stay informed before warnings are issued using radar data and National Weather Service (NWS) products.
- Don't wait for a heads up call from the NWS.

Ways to Report

- Phone: 800-Ph667-1218
- Twitter & Facebook:
(@NWSGrandForks)
#NDwx • #MNwx
- Online: inws.ncep.noaa.gov/report
- Email: fgf.reports@noaa.gov

How to Report

- Who?** [Source...trained spotter]
What? [What do you see? Convey uncertainty]
Where? [Reference a town, street, lat/lon; what way are you looking]
When? [In the past, relay time of event]
Damage? [Be descriptive]

What to Report

Strong Winds or damage. Measured or estimate.

Winds 50 mph or greater. Any tree or structure damage, either presently occurring or in the past.

< 58 mph - Whole trees in motion; twigs and small limbs break off trees

58-72 mph - Severe Thunderstorm criteria begins. Shingles torn off or minor structural damage; breaks off large limbs; pushes over shallow rooted trees

73-112 mph - Substantial roof and structural damage; windows broken; trailer houses overturned; large trees uprooted

113+ mph - Roofs torn off houses; weak buildings and trailer houses destroyed

Large Hail. Severe thunderstorm criteria ≥ 1 inch diameter. Report hail of **ANY** size. Avoid reporting as "marbles" which can be many sizes.

Wall Clouds or Funnel Clouds. Rotation, movement and consistency of inflow are important.

Tornadoes. Ongoing or lifted? Damaging? Is it rain-wrapped? Was it brief? Size, rope, large, etc.?

Flash Flooding. Water standing on, or flowing over road. Roads washed out. People or vehicles swept away by flowing water. Rivers or streams out of their banks. Heavy rains in excess of an inch per hour.

SOURCES OF INFORMATION

National Weather Service Grand Forks

- weather.gov/grandforks
- www.weather.gov/radarlite/loop?radarid=KMX
- weather.gov/fgf/severe
- weather.gov/fgf/stormspotting
- facebook.com/NWSGrandForks
- twitter.com/NWSGrandForks
- youtube.com/NWSGrandForks

Storm Prediction Center - spc.noaa.gov



Remember, Safety first!

- Always have a planned escape route.
- Try to spot in pairs.
- The safest place from hail and lightning is in your vehicle.
- Do not drive into water of any depth.

Hail Diameter	Description	Hail Diameter	Description
¼"	Pea	1.75"	Golf Ball
½"	Dime	2"	Hen Egg
¾"	Penny	2.50"	Tennis Ball
1"	Quarter	2.75"	Baseball
1.25"	Half Dollar	3"	Tea Cup
1.50"	Ping Pong	4"	Grapefruit

To update your spotter information (address, phone number, email) or other administrative purposes, please contact us via email at nws.grandforks@noaa.gov.

Tornado

"A violently rotating column of air attached to a nearby shower or thunderstorm, *and* in contact with the ground. Visible cloud or appearance of funnel not needed."

Before you report a tornado consider the following:



- ⇒ Is the cloud feature attached to the updraft?
- ⇒ Is the feature rotating along a vertical axis?
- ⇒ Is there debris underneath the feature?

Wall Clouds

- Suggest inflow/updraft
- Attached to rain-free cloud base
- Maintain position with respect to rain
- May contain tail cloud that slopes upward from precipitation into storm

Shelf Clouds

- Suggest downdraft/outflow
- Leading edge of gust front, moving away from rain
- Slope downward away from precipitation area
- Often with squall line

Funnel Clouds VS. Tail Clouds

- Funnel clouds rotate, usually rapidly, extending downward from cloud base.
- As opposed to scud clouds, funnel clouds typically have a laminar or smooth appearance
- Funnel clouds are located near updraft, usually vertical, and several orders of magnitude smaller than parent wall cloud.
- Tail clouds are often horizontal and funnel-like, but do *not* rotate. They should not be confused with actual funnel clouds for these reasons.

Watch vs Warning

WATCH - Issued when conditions are favorable for the development of severe weather (4-6 hours in length & covers multiple counties. Goal - to heighten awareness. Types of WATCHES (Tornado, Severe Thunderstorm, & Flood Watch)

WARNING - Issued when severe weather is occurring or imminent (30-60 minutes in length & covers portions of counties). Goal - take protective action now. Types of Warnings (Tornado, Severe Thunderstorm, & Flash Flood).

TORNADO/FLASH FLOOD EMERGENCY - Significant damage. Fatalities likely. High confidence.

Severe Thunderstorm warning criteria

⇒ 1" diameter hail OR 58 mph wind gusts

Tornado warning criteria

⇒ Sighting or radar detection of funnel cloud or tornado.

Our Mission - Provide weather, water, and climate data, forecasts, warnings and impact-based decision support services for the **protection of life & property** and **enhancement of the national economy**. 24x7x365!



***WHO** can make spotter training better each year? **YOU**, that's who! Local pictures and video of wall clouds, funnel clouds, large hail and other features provide examples that ND/MN spotters are more likely to see. New pictures and video also make the talk more interesting. Send your pictures and/or video to fgf.reports@noaa.gov. Your contribution could end up in next year's presentation.*

Spotter Registration Information

Spotter registration can be completed one of two ways, either online or via email.

- **Method #1 (Preferred)** - Scan QR code or go to weather.gov/fgf/registration and then submit registration form for new or updated information
- **Method #2** - Send the following information to nws.grandforks@noaa.gov
 - Name and mailing address
 - Residence address (if different)*
 - Phone numbers available to spot (cell, work, home)

* Residence address is needed to plot your location so we can cross-reference your information to what we are seeing on radar

Once your information has been received, your application will be confirmed and spotter number assigned via return email. Please allow up to one month for a reply.

